CLAIMS:

1. A method of decontaminating an enclosed space comprising the steps of providing an aqueous solution of hydrogen peroxide in the enclosed space, producing hydrogen peroxide/water vapour from said aqueous solution, creating an air stream in the enclosed space, introducing hydrogen peroxide/water vapour into the air stream, distributing the hydrogen peroxide/water vapour containing air stream throughout the space to be decontaminated and then removing the hydrogen peroxide/water vapour from the space; characterised in that the air stream is heated before hydrogen peroxide/water vapour is introduced to it, the hydrogen peroxide/water vapour is flash evaporated from an aqueous solution of hydrogen peroxide/water vapour from said supply into the air stream, and the air stream carrying the flash evaporated hydrogen peroxide/water vapour is distributed throughout the enclosed space to achieve bio-decontamination of the enclosed space.

2. A method as claimed in claim 1, characterised in that hydrogen peroxide/water vapour is added to the flow of heated air distributed in the enclosure until the dew point of the vapour is reached and condensation of hydrogen peroxide/water vapour on the surfaces of the enclosure takes place following which the hydrogen peroxide is removed from the enclosed space.

3. A method as claimed in claim 2, characterised in that the condensation of the hydrogen peroxide/water vapour is measured by a monitor and when the condensation has reached

a requisite level, air flow containing hydrogen peroxide/water vapour is terminated.

4. A method as claimed in claim 2 or claim 3, characterised in that condensation is measured in the enclosure at a number of locations by condensation monitors to ensure that condensation has taken place throughout the enclosure.

5. A method as claimed in claim 1, characterised in that air carrying hydrogen peroxide/water vapour is introduced into the enclosure until a predetermined concentration of hydrogen peroxide/water vapour in the atmosphere in the enclosure has been reached after which introduction of the air is terminated and the hydrogen peroxide is removed.

6. A method as claimed in claim 5, characterised in that biological indicators are used in the enclosure to determine when the concentration of hydrogen peroxide/water vapour in the atmosphere in the enclosure has reached the requisite level following which the hydrogen peroxide is removed.

7. A method as claimed in any of the preceding claims, characterised in that the heated air carrying hydrogen peroxide/water vapour is delivered as a jet within the enclosure.

8. A method as claimed in claim 7, characterised in that the heated air carrying hydrogen peroxide/water vapour is delivered in a universally rotating jet to distribute the vapour throughout the enclosure.

9. A method as claimed in any of the preceding claims, characterised in that one or more fans are provided spaced from the source of air carrying hydrogen peroxide/ water vapour into the enclosure to deliver the air carrying the vapour to remote locations of the enclosure from said source.

10. A method as claimed in any of the preceding claims, characterised in that the vapour of hydrogen peroxide and water also contains peracetic acid.

11. A method as claimed in claim any of claims 1 to 9, characterised in that the solution from which the hydrogen peroxide/water vapour is produced contains 30 to 35% hydrogen peroxide and a balance of water.

12. A method as claimed in claim 10, characterised in that the solution from which the hydrogen peroxide solution is produced comprises 15% hydrogen peroxide, 0.5% peracetic acid and a balance of water.

13. A method as claimed in any of the preceding claims, characterised in that hydrogen peroxide is removed by circulating the air containing hydrogen peroxide over a catalyst.

14. A method as claimed in any of claims 1 to 8, characterised in that the enclosure has a heating/ ventilation air conditioning system, the hydrogen peroxide is removed from the enclosure using the heating/ventilation air conditioning system.

15. A method as claimed in any of the preceding claims, characterised in that a plurality of heated air flows are provided to which the hydrogen peroxide/water vapour is added to provide a plurality of flows of heated air carrying hydrogen peroxide/water vapour at different locations in the enclosure.

16. A method as claimed in any of the preceding claims, characterised in that the method is controlled from outside the enclosure.

17. A method as claimed in any of the preceding claims, characterised in that the air is dehumidified to reduce the relative humidity in the enclosure to a predetermined level prior to delivering heated air containing hydrogen peroxide/water vapour to the enclosure.

18. A method as claimed in claim 17, characterised in that the air is dehumidified using an air conditioned system for the enclosed space.

19. A method as claimed in any of the preceding claims, characterised in that a portable apparatus is used in the enclosure having a duct with a fan for delivering air through the duct, a filter for filtering air entering the duct, a heater for heating air passing through the duct and means for delivering hydrogen peroxide/water vapour to the air passing through the duct and a nozzle for delivery of air carrying hydrogen peroxide/ water vapour from the duct, the nozzle being rotated universally to distribute the hydrogen peroxide/water vapours throughout the enclosure,

circulation of air carrying the hydrogen peroxide/water vapour through the duct causing decontamination of the duct.

20. An apparatus for decontaminating an enclosed space comprising means (12,13) for providing a flow of heated air, and means (15,16) for delivering a liquid decontaminant to the heated air to be evaporated into the heated air to produce an air stream containing a vapour of the decontaminant for delivery to a space to be decontaminated; characterised in that the apparatus comprises a self-contained unit having a duct (10) to be positioned within the enclosed space having an inlet end and an outlet end, a fan (12) for causing air to flow from the enclosed space through the duct, a filter (11) for filtering air at the inlet end of the duct, means (15) for holding a supply of aqueous hydrogen peroxide solution, means (16) for delivering aqueous hydrogen peroxide solution from said holding means to a heater (14) to flash evaporate the aqueous hydrogen peroxide to produce hydrogen peroxide/water vapour which is entrained in the air flow passing through the duct, a nozzle (18) at the outlet end of the duct and means (17) to rotate the nozzle universally to deliver hydrogen peroxide/water vapour throughout the enclosure, all internal and external surfaces of the apparatus open to the enclosure being exposed to the hydrogen peroxide/water vapour carrying air in the enclosure to decontaminate the surfaces.

21. An apparatus as claimed in claim 20, characterised in that the components of the apparatus are mounted in a support (19) for transport of the apparatus.

22. An apparatus as claimed in claim 21, characterised in that the self-contained unit is a mobile or portable unit for movement from location to location where it is to be used.

23. An apparatus as claimed in claim 22, characterised in that the supply (15) of hydrogen peroxide/water vapour and/or the nozzle and means (18a) to rotate the nozzle are readily removable for transport of the apparatus.

24. An apparatus as claimed in any of claims 20 to 23 including a control box (70) for controlling operation of the apparatus, wherein means are provided for delivering air carrying hydrogen peroxide/water vapour from the atmosphere in the enclosure through the control box to decontaminate inner surfaces of the control box.

25. An apparatus as claimed in any of claims 20 to 24 including a separate monitoring unit for monitoring the temperature of the atmosphere in the enclosure and the concentration of hydrogen peroxide/ water vapour in the atmosphere, wherein means are provided for delivering a flow of air carrying hydrogen peroxide/water vapour through the enclosure of the monitoring unit to decontaminate interior surfaces of the monitoring unit.

provided for delivering a flow of air carrying hydrogen peroxide/water vapour through the enclosure of the monitoring unit to decontaminate interior surfaces of the monitoring unit.